

Please insert the following paragraph before paragraph number [0001] on page 1:

[0001] This application is a divisional of U.S. patent application serial number 09/685,283, filed October 10, 2000.

IN THE CLAIMS:

Please cancel claims 1 - 15, 17, 18 and 20 without prejudice.

Please amend claim 16 as follows:

16. [(Once Amended)] An AA7000 series aluminum alloy having improved as-cast surface quality, said alloy is comprised of from about 5 to about 5,000 ppm calcium, from about 0.001% to about 0.25% grain refiners, and being essentially beryllium-free.

Please add new claims 22 - 63 as follows:

22. The alloy of claim 16, wherein the concentration of calcium is from about 5 to about 1,000 ppm.

23. The alloy of claim 16, wherein the concentration of calcium is from about 10 to about 750 ppm calcium.

24. The alloy of claim 16, wherein the concentration of calcium is from about 15 to about 500 ppm calcium.

25. The alloy of claim 16, wherein the concentration of grain refiners is from about 0.1 to about 0.25 wt.%.

26. The alloy of claim 16, wherein titanium is a grain refiner and the concentration of titanium is from about 0.0002 to about 0.20 wt.%.

27. The alloy of claim 16, wherein titanium is a grain refiner and the concentration of titanium from about 0.0003 to about 0.10 wt.%.

28. The alloy of claim 16, wherein boron is a grain refiner and the concentration of boron is about from 0.0001 to about 0.03 wt.%.

29. The alloy of claim 16, wherein boron is a grain refiner and the concentration of boron is about from about 0.0001 to about 0.01 wt.%.

30. The alloy of claim 16, wherein boron is a grain refiner and the concentration of boron is about from about 0.0003 to about 0.005 wt.%.

31. The alloy of claim 16, wherein carbon is a grain refiner and the concentration of carbon is about from about 0.00001 to about 0.001 wt.%.

32. The alloy of claim 16, wherein carbon is a grain refiner and the concentration of carbon is about from about 0.000015 to about 0.0004 wt.%.

33. The alloy of claim 16, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and boron is a grain refiner at a concentration from about 0.0001 to about 0.03 wt.%.

34. The alloy of claim 16, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and carbon is a grain refiner at a concentration from about 0.00001 to about 0.001 wt.%.

35. The alloy of claim 34, wherein the concentration of calcium is from about 8 ppm to about 14 ppm.

36. An AA7050-type aluminum alloy having improved as-cast surface quality, said alloy comprising from about 5 to about 5,000 ppm calcium, from about 0.001 to about 0.25 wt.% grain refiners, and being essentially beryllium-free.

37. The alloy of claim 36, wherein the concentration of calcium is from about 15 to about 500 ppm calcium.

38. The alloy of claim 36, wherein the grain refiners are selected from the group consisting of titanium, strontium, boron and carbon.

39. The alloy of claim 36, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and boron is a grain refiner at a concentration from about 0.0001 to about 0.03 wt.%.

40. The alloy of claim 36, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and carbon is a grain refiner at a concentration from about 0.00001 to about 0.001 wt.%.

41. The alloy of claim 40, wherein the concentration of calcium is from about 8 ppm to about 14 ppm.

42. An ingot cast from the aluminum alloy of claim 36.

43. An aluminum alloy having improved as-cast surface quality, said alloy consisting essentially of: about 5.7 to about 6.7 wt.% zinc, about 2.0 to about 2.6 wt.% copper, about 1.9 to about 2.6 wt.% magnesium, about 0.08 to 0.15 about zirconium, about 5 to about 5,000 ppm calcium, about 0.001 to

A3
cont

20053208-011802

about 0.25 wt.% grain refiners, the balance essentially aluminum with incidental elements and impurities, and being essentially beryllium-free.

44. The alloy of claim 43, wherein the concentration of calcium is from about 15 to about 500 ppm calcium.

45. The alloy of claim 43, wherein the grain refiners are selected from the group consisting of titanium, strontium, boron and carbon.

46. The alloy of claim 43, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and boron is a grain refiner at a concentration from about 0.0001 to about 0.03 wt.%.

47. The alloy of claim 43, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and carbon is a grain refiner at a concentration from about 0.00001 to about 0.001 wt.%.

48. The alloy of claim 47, wherein the concentration of calcium is from about 8 ppm to about 14 ppm.

49. An ingot cast from the aluminum alloy of claim 43.

50. An AA7055-type aluminum alloy having improved as-cast surface quality, said alloy comprising from about 5 to about 5,000 ppm calcium, from about 0.001 to about 0.25 wt.% grain refiners, and being essentially beryllium-free.

51. The alloy of claim 50, wherein the concentration of calcium is from about 15 to about 500 ppm calcium.

A3
CONF
2008-01-08

52. The alloy of claim 50, wherein the grain refiners are selected from the group consisting of titanium, strontium, boron and carbon.

53. The alloy of claim 50, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and boron is a grain refiner at a concentration from about 0.0001 to about 0.03 wt.%.

54. The alloy of claim 50, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and carbon is a grain refiner at a concentration from about 0.00001 to about 0.001 wt.%.

55. The alloy of claim 54, wherein the concentration of calcium is from about 8 ppm to about 14 ppm.

56. An ingot cast from the aluminum alloy of claim 50.

57. An aluminum alloy having improved as-cast surface quality, said alloy consisting essentially of: about 7.6 to about 8.4 wt.% zinc, about 2.0 to about 2.6 wt.% copper, about 1.8 to about 2.3 wt.% magnesium, about 0.08 to about 0.25 zirconium, about 5 to about 5,000 ppm calcium, about 0.001 to about 0.25 wt.% grain refiners, the balance essentially aluminum with incidental elements and impurities, and being essentially beryllium-free.

58. The alloy of claim 57, wherein the concentration of calcium is from about 15 to about 500 ppm calcium.

59. The alloy of claim 57, wherein the grain refiners are selected from the group consisting of titanium, strontium, boron and carbon.

AB
 cont
 2005-01-08 10:00

60. The alloy of claim 57, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and boron is a grain refiner at a concentration from about 0.0001 to about 0.03 wt.%.

61. The alloy of claim 57, wherein titanium is a grain refiner at a concentration from about 0.0002 to about 0.20 wt.% and carbon is a grain refiner at a concentration from about 0.00001 to about 0.001 wt.%.

AB 62. The alloy of claim 61, wherein the concentration of calcium is from about 8 ppm to about 14 ppm.

63. An ingot cast from the aluminum alloy of claim 57.

2008 FEB 01 09:00